

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of manufacturing glass articles by continuously separating glass gobs from a glass melt flow continuously flowing out of a nozzle at a rate of flow and forming the separated glass gobs with glass forming members that are intermittently or continuously moving, characterized in that:

moving a support member ~~is made to approach the~~ whereby said support member approaches a front end of the nozzle, ~~the~~ so that a front end of the glass melt flow is received by the support member, and then the support member is dropped more rapidly than the rate of flow of the glass melt flow to separate a glass gob from the glass melt flow;

transferring the separated glass gob ~~is transferred~~ from the support member to a stopped or moving glass forming member, which is operative to mold a glass article, during a transfer period; and

forming the glass article by at least one moving glass forming member, wherein

in the case where the glass gob is moved to a stopped glass forming member, the transfer period during which the glass forming member is stopped for transfer of the glass gob from the support member to the glass forming member is made shorter than ~~the~~ a gob preparation period, defined as the time required for ~~one cycle of~~ preparing one glass ~~gob~~ gob from the continuous glass melt flow using the support member and ~~moving~~ transferring the glass gob to the glass forming member.

2. (currently amended): A method of manufacturing glass articles by continuously separating glass gobs from a glass melt flow continuously flowing out of a nozzle at a rate of flow and forming the separated glass gobs with glass forming members that are intermittently or continuously moving, characterized in that:

moving a support member ~~is made to approach the~~ whereby said support member approaches a front end of the nozzle, ~~the~~ so that a front end of the glass melt flow is received by

the support member, this front end is supported to form a constriction between ~~the~~ a nozzle side and ~~the~~ a support side of the glass melt flow, and then the support member is dropped to separate the glass gob from the glass melt flow at the constriction;

transferring the separated glass gob ~~is transferred~~ from the support member to a stopped or moving glass forming member, which is operative to form a glass article, during a transfer period; and

forming the glass article by at least one moving glass forming member, wherein

in the case where the glass gob is moved to a stopped glass forming member, the transfer period during which the glass forming member is stopped for transfer of the glass gob from the support member to the glass forming member is made shorter than ~~the~~ a gob preparation period, defined as the time required for ~~one cycle of~~ preparing one glass ~~gob~~ gob from the continuous glass melt flow using the support member and ~~moving~~ transferring the glass gob to the glass forming member.

3. (currently amended): A method of manufacturing glass articles by continuously separating glass gobs from a glass melt flow continuously flowing out of a nozzle at a rate of flow and molding the separated glass gobs with glass forming members that are intermittently or continuously moving, characterized in that:

moving a support member ~~is made to approach the~~ whereby said support member approaches a front end of the nozzle, the so that a front end of the glass melt flow is received by the support member, this front end is supported to form a constriction between the nozzle side and the support side of the glass melt flow, and then support of the support member is removed to separate the glass gob from the glass melt flow at the constriction;

transferring the separated glass gob ~~is transferred~~ from the support member to a stopped or moving glass forming member, which is operative to form a glass article, during a transfer period; and

forming the glass article by at least one moving glass forming member, wherein

in the case where the glass gob is moved to a stopped glass forming member, the transfer period during which the glass forming member is stopped for transfer of the glass gob from the support member to the glass forming member is made shorter than ~~the~~ a gob preparation period,

defined as the time required for ~~one cycle of~~ preparing one glass glob from the continuous glass melt flow using the support member and ~~moving~~ transferring the glass gob to the glass forming member.

4. (currently amended): The manufacturing method according to any of claims 1 to 3, wherein the transfer period during which the glass forming member is stopped for transfer of the glass gob from the support member to the glass forming member, or the time for transferring the glass gob from the support member to a moving glass forming member, is made shorter than ~~the~~ a gob separation period, defined as the time from when the support member begins to approach the nozzle to when the glass gob has been completely separated.

5. (currently amended): A method of manufacturing glass articles by continuously separating glass gobs from a glass melt flow continuously flowing out of a nozzle at a rate of flow and forming the separated glass gobs with glass forming members that are intermittently or continuously moving, ~~characterized in that comprising:~~

~~the a gob forming~~-step of receiving ~~the a~~ front end of the glass melt flow by a support member and dropping the support member more rapidly than the flow rate of the glass melt flow to separate the glass gob, said gob forming step being performed ~~is repeated~~ once in a fixed cycle period,

transferring the separated glass gob ~~is transferred~~ from the support member to a stopped or moving glass forming member to mold a glass article; and

forming the glass article by at least one moving glass forming member, wherein

in the case where the glass gob is moved to a stopped glass forming member, the period during which the glass forming member is stopped for transfer of the glass gob from the support member to the glass forming member is made less than or equal to 70 percent of ~~the above~~ said fixed cycle period.

6. (currently amended): A method of manufacturing glass articles by continuously separating glass gobs from a glass melt flow continuously flowing out of a nozzle at a rate of flow and forming the separated glass gobs with glass forming members that are intermittently or continuously moving, ~~characterized in that comprising:~~

~~the a gob forming~~-step of receiving ~~the a~~ front end of the glass melt flow by a support member, supporting this front end to form a constriction between the nozzle side and the support side of the glass melt flow, and dropping the support member to separate the glass gob from the glass melt flow at the constriction, said gob forming step being performed ~~is repeated~~ once in a fixed cycle period,

transferring the separated glass gob ~~is transferred~~ from the support member to a stopped or moving glass forming member to mold a glass article; and

forming the glass article by at least one moving glass forming member, wherein

in the case where the glass gob is moved to a stopped glass forming member, the period during which the glass forming member is stopped for transfer of the glass gob from the support member to the glass forming member is made less than or equal to 70 percent of ~~the above~~ said fixed cycle period.

7. (currently amended): A method of manufacturing glass articles by continuously separating glass gobs from a glass melt flow continuously flowing out of a nozzle at a rate of flow and forming the separated glass gobs with glass forming members that are intermittently or continuously moving, ~~characterized in that comprising:~~

~~the a gob forming~~-step of receiving ~~the a~~ front end of the glass melt flow by a support member, supporting this front end to form a constriction between the nozzle side and the support side of the glass melt flow, and removing support from the support member to separate the glass gob from the glass melt flow at the constriction, said gob forming step being performed ~~is repeated~~ once in a fixed cycle period,

transferring the separated glass gob ~~is transferred~~ from the support member to a stopped or moving glass forming member to form a glass article; and

forming the glass article by at least one moving glass forming member, wherein

in the case where the glass gob is moved to a stopped glass forming member, the transfer period during which the glass forming member is stopped for transfer of the glass gob from the support member to the glass forming member is made less than or equal to 70 percent of ~~the above~~ said fixed cycle period.

8. (currently amended): The manufacturing method according to any of claims 1 to ~~7~~ 3 and ~~5-7~~, wherein the surface receiving the glass gob of the support member is a flat surface and this flat surface is rotated 360° to transfer the glass gob to the glass forming member.

9. (currently amended): The manufacturing method according to any of claims 1 to ~~8~~ 3 and ~~5-7~~, wherein the surface of the support member receiving the glass gob is tilted to cause the glass gob to fall off, thereby transferring the glass gob to the glass forming member, and the direction of the fall of the glass gob is consistent with the direction of movement of the glass forming member.

10. (currently amended): The manufacturing method according to any of claims 1 to ~~9~~ 3 and ~~5-7~~, wherein two consecutively produced glass gobs are separated by receiving the glass melt flow on two different surfaces of the support member.

11. (currently amended): The manufacturing method according to any of claims 1 to ~~12~~ 3 and ~~5-7~~, wherein, in the course of transferring the glass gob from the support member to the glass forming member, the glass gob is turned upside down.

12. (currently amended): The manufacturing method according to any of claims 1 to ~~14~~ 3 and ~~5-7~~, wherein gas is blown from the surface of the support member receiving the front end of the glass melt flow when receiving this front end.

13. (currently amended): The manufacturing method according to any of claims 1 to ~~12~~ 3 and ~~5-7~~, wherein the glass article is a preform for press molding comprised of optical glass.

14. (original): A method of manufacturing optical elements, characterized in that a glass article obtained by the manufacturing method according to claim 13 is heat softened and then press molded.

15. (currently amended): A method of manufacturing glass gobs in which glass gobs are formed from a glass melt flowing out of a nozzle, characterized in that:

prior to dripping from the nozzle, bringing the glass melt flowing out ~~is brought~~ into contact with a support member beneath the lower end of the glass melt flowing out of the nozzle,

the glass melt being cooled when brought into contact with the support member that is cooled by circulation of a coolant through the support member,

then moving the support member ~~is then moved~~ downward from beneath the lower end of the glass melt at a speed greater than the flow speed of the glass melt, causing a glass gob of prescribed weight to drip onto the support member from the nozzle, and

thereafter moving the support member downward in such a manner that contact is temporarily broken between the support member and the lower end of the glass melt.

16. (cancelled):

17. (currently amended): The manufacturing method according to claim 15 ~~or 16~~, further characterized in that the glass glob that has dripped is rendered spherical on the support member or after being moved to the glass forming member from the support member.

18. (currently amended): The manufacturing method according to ~~any of claims 15 to 17~~ claim 15, further characterized in that the difference between the softening point and the glass transition temperature of the glass is less than or equal to 100°C.

19. (currently amended): The method of manufacturing glass gobs according to ~~any of claims 15 to 18~~ claim 15, further characterized in that the glass gob is a preform for press molding.

20. (original): A method of manufacturing optical elements, characterized in that a preform for press molding manufactured by the manufacturing method according to claim 19 is heat softened and press molded.

21. (new): The manufacturing method according to any of claims 1 to 3 and 5-7, wherein said forming step comprises float forming while said glass gob is formed while floating on a blown gas.